CLAIMS

[6000] I claim:

1: An improved fastener gun having a magazine holding a plurality of stacked caps, said magazine including pusher means for pushing said plurality of stacked caps through said magazine toward a first end of said magazine, said fastener gun being adapted for sequentially shooting fasteners from a nose through each of said plurality of caps; said plurality of stacked caps having a leading cap adjacent said first end of said magazine; said leading cap having a leading portion and a trailing portion;

wherein the improvement comprises a cap feeding apparatus in combination with said fastener gun, said cap feeding apparatus comprising:

(a) a cap feeding body with a feeding chamber formed therewithin, said feeding chamber having a first end in communication with said first end of said magazine and second end adjacent said nose;

(b) retaining means, in opposition to said pusher means, for opposing emergence of said leading cap from said magazine;

(c) a shuttle mounted for reciprocation within said chamber; said shuttle having a forward edge and a rearward edge; said shuttle reciprocating between:

i. a cap-receiving position in which said leading cap may emerge from said magazine into substantial coplanar relationship with said shuttle forward of said shuttle's forward edge; and

ii. a cap-ejecting position in which said rearward edge of said shuttle retains said leading portion of said leading cap within said magazine;

such that said rearward edge of said shuttle becomes interposed between said retaining means and said leading cap as said shuttle moves from said cap-ejecting position to said cap-receiving position.

2: The improved fastener gun as recited in claim 1, in which said retaining means is a spring arm that engages said trailing portion of said leading cap when said shuttle is in said cap-ejecting position.

3: The improved fastener gun as recited in claim 1, in which said cap feeding apparatus further comprises a flipper arm mounted about an axis for pivoting movement with respect to said cap feeding body such that said flipper arm engages said leading cap as said leading cap emerges from said second end of said feeding chamber.

4: An improved fastener gun having a magazine holding a plurality of stacked caps, said magazine including pusher means for pushing said plurality of stacked caps through said magazine toward a first end of said magazine, said fastener gun being adapted for sequentially shooting fasteners from a nose through each of said plurality of caps; said plurality of stacked caps having a leading cap adjacent said first end of said magazine; said leading cap having a leading portion and a trailing portion;

wherein the improvement comprises a cap feeding apparatus in combination with said fastener gun, said cap feeding apparatus comprising:

(a) a cap feeding body with a feeding chamber formed therewithin, said feeding chamber having a first end in communication with said first end of said magazine and second end adjacent said nose;

(b) a shuttle mounted for reciprocation within said chamber; said shuttle having a forward edge and a rearward edge; said shuttle reciprocating between:

i. a cap-receiving position in which said leading cap may emerge from said magazine into substantial coplanar relationship with said shuttle forward of said shuttle's forward edge; and

ii. a cap-ejecting position in which said leading cap is pushed by said shuttle forward edge to emerge from said feeding chamber in a feed direction; and

(c) a flipper arm mounted about an axis for pivoting movement with respect to said cap feeding body such that said flipper arm engages said leading cap as said leading cap emerges from said second end of said feeding chamber and causes said leading cap to flip about a flipping axis transverse to said feed direction.

5: The improved fastener gun as recited in claim 4, in which leading cap is flipped substantially ninety degrees by said flipper arm.

6: An improved fastener gun having a magazine holding a plurality of stacked caps, said magazine including pusher means for pushing said plurality of stacked caps through said magazine toward a first end of said magazine, said fastener gun being adapted for sequentially shooting fasteners from a nose through each of said plurality of caps; said plurality of stacked caps having a leading cap adjacent said first end of said magazine; said leading cap having a leading portion and a trailing portion;

wherein the improvement comprises a cap feeding apparatus in combination with said fastener gun, said cap feeding apparatus comprising:

(a) a cap feeding body with a feeding chamber formed therewithin, said feeding chamber having a first end in communication with said first end of said magazine and second end adjacent said nose;

(b) retaining means, in opposition to said pusher means, for opposing emergence of said leading cap from said magazine;

(c) a shuttle mounted for reciprocation within said chamber; said shuttle having a forward edge and a rearward edge; said shuttle reciprocating between:

i. a cap-receiving position in which said leading cap may emerge from said magazine into substantial coplanar relationship with said shuttle forward of said shuttle's forward edge; and

ii. a cap-ejecting position in which said rearward edge of said shuttle retains said leading portion of said leading cap within said magazine while said leading cap is pushed by said shuttle forward edge to emerge from said feeding chamber in a feed direction;

such that said rearward edge of said shuttle becomes interposed between said retaining means and said leading cap as said shuttle moves from said cap-ejecting position to said cap-receiving position; and

(d) a flipper arm mounted about an axis for pivoting movement with respect to said

cap feeding body such that said flipper arm engages said leading cap as said leading cap emerges from said second end of said feeding chamber and causes said leading cap to flip about a flipping axis transverse to said feed direction.

7: The improved fastener gun as recited in claim 4, in which leading cap is flipped substantially ninety degrees by said flipper arm.